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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,413	09/08/2003	Charles T. Bye	P03.0225 (H0004559,SBE 16	9020
128	7590	06/15/2005	EXAMINER	
HONEYWELL INTERNATIONAL INC. 101 COLUMBIA ROAD P O BOX 2245 MORRISTOWN, NJ 07962-2245			LOUIS JACQUES, JACQUES H	
			ART UNIT	PAPER NUMBER
			3661	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/657,413

Applicant(s)

BYE ET AL.

Examiner

Jacques H. Louis-Jacques

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 9, 11-15, 17 and 19-33 is/are rejected.
- 7) ☒ Claim(s) 7, 10, 16 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01312005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6, 8-9, 11-15, 17, 19, 20-25 and 32-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Akopian [6,651,031].

Akopian discloses a method for providing time using a multiple-clock model and a clock system using such a model. According to Akopian, there is provided a navigation system that comprises an inertial measurement unit having a clock, navigation computer having a clock, and a clock controller, wherein the clock controller enables only the navigation computer to be clocked by the clock of the navigation controller at times, and wherein the clock controller enables both the navigation computer and the inertial measurement unit to be clocked by clock of the navigation computer at other times. See figure 3 and columns 2 and 12. In addition, as shown in figure 3, the clock controller comprises a phase controller that controls the phase a clock signal. The inertial measurement unit, according to Akopian, includes a first switch, wherein the navigation computer includes a second switch, and wherein the clock controller controls the first and second switches so as to enable only the navigation computer to be clocked by the clock the navigation computer at times, and so as to enable both the navigation computer and the inertial measurement unit be clocked by the clock of the navigation computer at other times. See

figure 3 and columns 2 and 3. Furthermore, the first switch comprises first and second terminals, wherein the first terminal is coupled to the clock of the inertial measurement unit and the second terminal is coupled to the second switch, wherein the second switch comprises a third terminal, wherein the third terminal is coupled to the clock of the navigation computer, and wherein the clock controller controls the first and second switches. See figure 3. As described in columns 1 and 2, the navigation system further comprising a GPS receiver having a clock, wherein the clock of the GPS receiver is coupled to the clock controller, wherein the clock controller enables all of the inertial measurement unit, the navigation computer, and the GPS receiver to be clocked by the clock of the GPS receiver at still other times. See columns 2 and 3. The inertial measurement unit includes a first switch, wherein the navigation computer includes a second switch, and wherein the clock controller controls the first and second switches so as to enable only the navigation computer to be clocked by the clock of the navigation computer at times, so as to enable both the inertial measurement unit and the navigation computer to be clocked by the clock of the navigation computer at other times, and to enable all of the inertial measurement unit, the navigation computer, and the GPS receiver to be clocked by the clock of the GPS receiver at still other times. See columns 3 and 4. The clock controller, according to Akopian, comprises a phase controller that controls the phase a clock signal from the clock of the GPS receiver. See columns 2-3 and 12. The phase controller comprises count down register having a first input coupled to a clock source operating a multiple of the clock the GPS receiver, a second input coupled the clock the GPS receiver, and third input receiving an initial count value (state

estimate). See figure 3 and columns 12 and 13. Akopian also discloses supplying a first clock signal from a clock a navigation computer only to components of the navigation computer in response to a first condition, supplying the first clock signal from the clock of the navigation computer to components of the navigation computer and to components of an inertial measurement unit in response to a second condition, and supplying a second clock signal from a clock of a GPS receiver components of the GPS receiver, to components of the navigation computer, and to components of the inertial measurement unit in response to a third condition. See columns 2 and 3. The conditions, according to Akopian, comprise absence or failure of the inertial measurement unit and absence or on-execution of deep integration (Kalman) of the GPS receiver. See columns 4 and 5.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akopian [6,651,031] in view Applicant's admitted prior art (AAPA).

Akopian does not particularly disclose the time alignment of inertial data and the tracking of loop commands. However, as described in the background of the invention, Applicant recognized that the prior art discloses adjusting time alignment of inertial data from the inertial measurement unit, GPS data from the GPS receiver, and tracking loop commands

provided by the navigation computer. Thus, it would have been obvious to one skilled in the art at the time of the invention to be motivated to modify the system of Akopian by incorporating the time alignment and tracking loop commands of the known art because such modification would provide a more precise clock control.

Allowable Subject Matter

5. Claims 7, 10, 16, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art do not particularly disclose that the first switch comprises first and second terminals and a first output, wherein the second switch comprises third and fourth terminals and a second output, wherein the first terminal is coupled to the clock of the inertial measurement unit, wherein the second terminal is coupled to the second output, wherein the third terminal is coupled to the clock of the navigation computer, wherein the fourth terminal is coupled to the clock controller, wherein the clock of the GPS receiver is coupled to the clock controller, and wherein the clock controller controls the first and second switches.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 3661

5,894,323	Kain et al	Apr. 1999
6,234,799	Lin	May 2001
6,292,748	Harrison	Sep. 2001
6,317,688	Bruckner et al	Nov. 2001
6,721,657	Ford et al	Apr. 2004
US 20040093435	Purho	May 2004
US 20050060093	Ford et al	Mar. 2005

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacques H. Louis-Jacques whose telephone number is 571-272-6962. The examiner can normally be reached on M-Th 5:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jacques H Louis-Jacques
Primary Examiner
Art Unit 3661

/jlj

Jacques H. Louis-Jacques
JACQUES H. LOUIS-JACQUES
PRIMARY EXAMINER